

ABSTRACT OF THE DISCLOSURE

A mobile telecommunication system and a hand-off method of radio speech paths at the system, in which radio resources in the system can be used efficiently, are provided. A radio base station controller in the system monitors FERs (frame error rates) of upstream radio speech paths of radio speech paths using between a mobile telecommunication terminal in a service area overlapped service areas of plural radio base stations and the plural radio base stations in a predetermined constant cycle. At the case that some radio speech paths whose FERs exceeded a frame quality threshold value exist, the best frame is selected from the radio speech paths excluded the radio speech paths whose FERs exceeded the frame quality threshold value, and the FER measured result of the selected best frame is obtained. And when the FER measured result of the selected best frame from the radio speech paths excluded the radio speech paths whose FERs exceeded the frame quality threshold value is equal to the FER measured result of the selected best frame from all radio speech paths, downstream speech levels of the radio speech paths excluded the radio speech paths whose FERs exceeded the frame quality threshold value are monitored by electric field strength of pilot signals of the downstream radio speech paths. And the downstream speech levels are compared with a speech level threshold value. And when some radio speech paths whose speech levels exceeded the speech level threshold value exist, the radio speech paths whose FERs exceeded the frame quality threshold value are dropped as a hand-off.